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| ***Catalog Year 2022-2023****BS, Geology**Engineering Geology* | ***(For internal use only)***[ ]  *No change*[ ]  *UCC proposal* |

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is an efficient strategy only. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Elective, and university requirements (see pg.2) are based on Catalog Year.

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| **Course Subject and Title** | **Cr.**  | **Min.** **Grade** | **\*GE,** **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co Requisite** |
| Semester One |
| GE Objective 1: ENGL 1101 Writing and Rhetoric I | 3 | C- | GE | F, S, Su | Appropriate placement score |  |
| GE Objective 7/8: GEOL 1107 Real Monsters | 3 |  | GE | F, S |  |  |
| GE Objective 3: MATH 1170 Calculus | 4 |  | GE | F, S, Su | MATH 1143 and 1144 or 1147 |  |
| Free Electives | 5 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Two |
| GEOL 2205 Solid Earth | 4 |  |  | S |  |  |
| GE Objective 1: ENGL 1102 Writing and Rhetoric II | 3 | C- | GE | F, S, Su | ENGL 1101 or equivalent |  |
| GE Objective 5: CHEM 1111 and 1111L General Chemistry I | 5 |  | GE | F, S, Su | MATH 1143 or 1147  | CHEM 1111L |
| MATH 1175 Calculus II  | 3-4 |  |  | F, S | MATH 1170 |  |
| OR MATH 3350 Statistical Methods |  | UU | F, S | MATH 1160 of MATH 1170 |  |
| Free Elective | 0-1 |  |  |  |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Three |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F, S, Su |  |  |
| GEOL 2204 Fluid Earth | 4 |  |  | F |  |  |
| CHEM 1112 and 1112L Gen Chemistry II | 4 |  |  | F, S, Su | CEM 1111 and 1111L, MATH 1143 or 1147 | CHEM 1112L |
| GEOL 3313 Earth Materials I | 3 |  | UM | F | GEOL 2205, CHEM 1111 & Lab |  |
| Free Elective | 1 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Four |  |  |  |  |  |  |
| GEOL 3314 Earth Materials II | 3 |  | UM | S |  |  |
| CE/GEOL 4454 Basic Engineering Geology | 3 |  | UM | D |  | GEOL 3314 or CE 3332 |
| GE Objective 5: PHYS 1111 General Physics I | 3-4 |  | GE | F,S | MATH 1143 or MATH 1147 |  |
| OR PHYS 2211 Engineering Physics I  |  | MATH 1175 |  |
| GE Objective 6 | 3 |  | GE | F, S, Su |  |  |
| Free Electives | 2-3 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Semester Five |  |  |  |  |  |  |
| GEOL 3310 Geologic Field Methods | 3 |  | UM | F | GEOL 2205 |  |
| GEOL 4452 Sedimentation-Stratigraphy | 4 |  | UM | F | GEOL 3310, ENGL 1102, CHEM 1111 & Lab |  |
| CE/GEOL 4455 Geologic Data Methods | 3 |  | UM | D | Equivalent to CE 4455; Prereq: CE 4454 |  |
| GE Objective 4 | 3 |  | GE | F, S, Su |  |  |
| GE Objective 6 | 3 |  | GE | F, S, Su |  |  |
|  Total | 16 |  |  |  |  |  |
| Semester Six |  |  |  |  |  |  |
| GEOL 3315 Evolution of Earth’s Surface | 4 |  | UM | S | GEOL 2205 |  |
| GEOL 4403 and GEOL 4403 Lab Principles of GIS | 3 |  | UM | F, S |  |  |
| GEOL 4421 Structural Geology | 4 |  | UM | S | GEOL 4452, MATH 1147 |  |
| GE Objective 4 | 3 |  | GE | F, S, Su |  |  |
| Free Electives | 1 |  |  |  |  |  |
|  Total | 15 |  |  |  |  |  |
| Summer Term |
| GEOL 4450 Field Geology | 6 |  | UM | Su | GEOL 3314, GEOL 4421, GEOL 4452 |  |
|  Total | 6 |  |  |  |  |  |
| Semester Seven |  |  |  |  |  |  |
| CE/GEOL 4475 Essentials of Geomechanics | 3 |  | UM | D | GEOL 4421 or CE/ENGR/ME 3350 |  |
| CE 4480 Earthquake Engineering^ | 3 |  | UM | D | GEOL 3313, CE 3332, or permission of instructor |  |
| Elective Courses | 3 |  |  |  | See Undergraduate Catalog |  |
| GE Objective 9 | 3 |  | GE | F,S, Su |  |  |
|  Total | 12 |  |  |  |  |  |
| Semester Eight |  |  |  |  |  |  |
| CE/GEOL 4476 Engineering Geology Project | 1 |  | UM | D | GEOL 4454 or CE 4454 |  |
| Elective Courses | 6 |  |  |  | See Undergraduate Catalog |  |
| Free Electives | 3 |  |  |  |  |  |
|  Total | 10 |  |  |  |  |  |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major\*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)  |

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|  BS, Geology, Engineering Geology Page 2  |
| **2022-2023 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **36 cr. min** |
| **MAJOR REQUIREMENTS** | **58-59** | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| GEOL 1107 Real Monsters (included in General Education) |  ENGL 1102 | 3 |
| GEOL 2204 Fluid Earth | 4 | 2. Oral Communication (3 cr. min) COMM 1101 | 3 |
| GEOL 2205 Solid Earth | 4 | 3. Mathematics (3 cr. min) MATH 1170  | 4 |
| GEOL 3310 Geologic Field Methods | 3 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| GEOL 3313 Earth Materials I | 3 |  |  |
| GEOL 3314 Earth Materials II | 3 |  |  |
| GEOL 3315 Evolution of the Earth’s Surface | 4 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| GEOL 4403 Principles of GIS & GEOL 4403L Principles of GIS Lab | 3 | CHEM 1111 & 1111L General Chemistry I and Lab  | 5 |
| GEOL 4421 Structural Geology | 4 | PHYS 1111 General Physics I OR PHYS 2211 Engineering Physics I  | 3-4 |
| GEOL 4450 Field Geology | 6 |
| GEOL 4452 Sedimentation-Stratigraphy | 4 | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| **Program Required Courses** |  |  |  |
| CHEM 1111 & 1111L General Chemistry I and Lab (included in General Ed) |  |  |
| CHEM 1112 & 1112L General Chemistry II and Lab | 4 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| MATH 1170 Calculus I (included in General Ed) | 7. Critical Thinking | GEOL 1107 Real Monsters | 3 |
| MATH 1175 Calculus II  | 4 | 8. Information Literacy  |
| OR MATH 3350 Statistical Methods | 3 | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| \*PHYS 1111 General Physics I |  |  |  |
| OR PHYS 2211 Engineering Physics I (included in General Ed) | General Education Elective to reach 36 cr. min. **(if necessary)** |
| **Emphasis in Engineering** |   |  |
| CE/GEOL 4454 Basic Engineering Geology | 3 |  |  |
| CE/GEOL 4455 Geologic Data Methods | 3 |  Total GE | 39-40 |
| CE/GEOL 4475 Essentials of Geomechanics | 3 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  *http://coursecat.isu.edu/undergraduate/programs/* |
| CE/GEOL 4476 Engineering Geology Project | 1 |
| CE 4480 Earthquake Engineering | 3 |  |  |
|  |  | **MAP Credit Summary** | **CR** |
|  |  | Major  | 58-59 |
|  |  | General Education  | 39-40 |
|  |  | Upper Division Free Electives to reach 36 credits | 0 |
|  |  | Free Electives to reach 120 credits | 21-23 |
|  |  |  TOTAL | 120 |
|  |  |  |
|  |  | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
|  |  | Minimum 36 cr. General Education Objectives (15 cr. AAS) | x |
|  |  | Minimum 15 cr. Upper Division in Major (0 cr. Associate) | x |
|  |  | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  | x |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) |  | x |
|  |  |  |
|  |  | ***MAP Completion Status (for internal use only)*** |
| **Advising Notes** |  | *Date* |
| **\*** May choose the following optional courses:  |  |  |
| [PHYS 1113](http://coursecat.isu.edu/search/?P=PHYS%201113), [PHYS 1114](http://coursecat.isu.edu/search/?P=PHYS%201114), General Physics Laboratory, 2 cr;  | *CAA or COT:* |  |
| [PHYS 2213](http://coursecat.isu.edu/search/?P=PHYS%202213), [PHYS 2214](http://coursecat.isu.edu/search/?P=PHYS%202214), Engineering Physics Laboratory, 2 cr. |  |  |
|  | **Complete College American Momentum Year****Math and English course in first year-Specific GE MATH course identified****9 credits in the Major area in first year****15 credits each semester (or 30 in academic year)****Milestone courses** |
| \*\*Transfer students may substitute other courses for   |
| [GEOL 1107](http://coursecat.isu.edu/search/?P=GEOL%201107) with the permission of the Geosciences Department |
| Chair or Geosciences Undergraduate Advisor. |
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 Form Revised 9.10.2019